

1000455001 024662

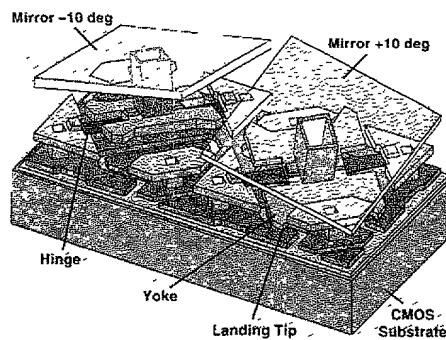


FIGURE 1

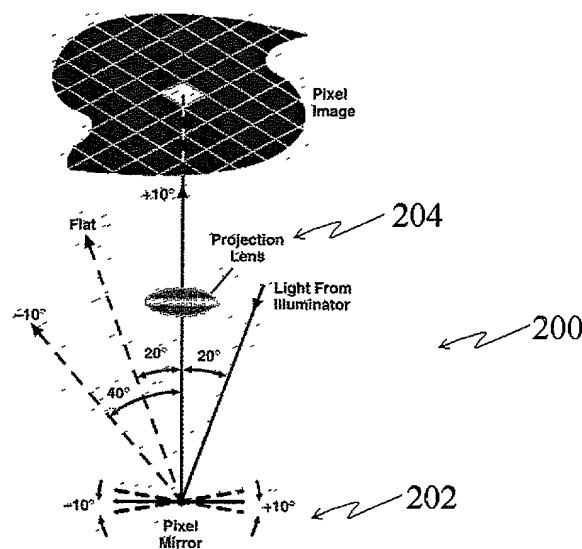


FIGURE 2

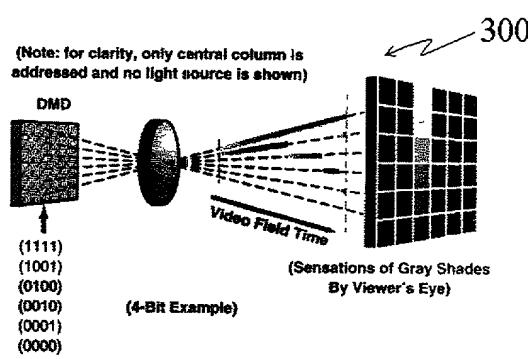


FIGURE 3

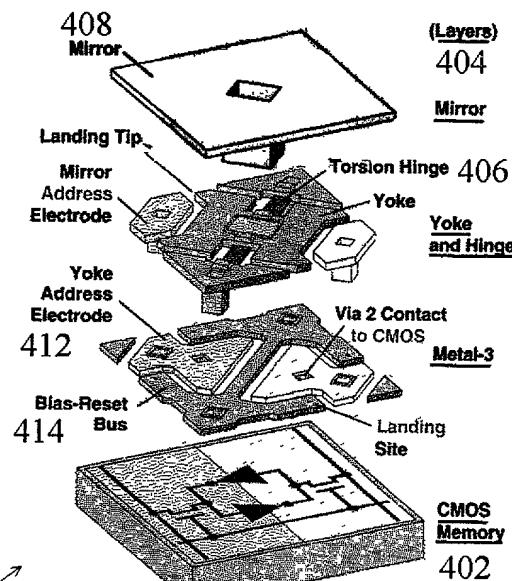


FIGURE 4

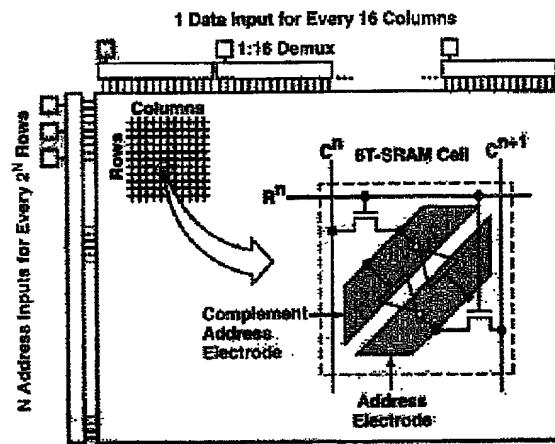


FIGURE 5

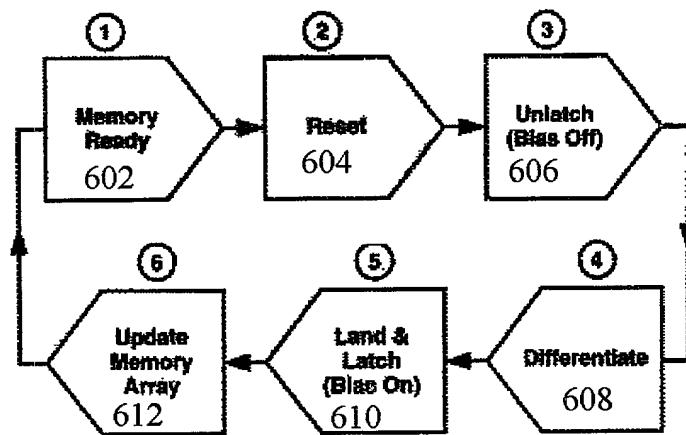


FIGURE 6

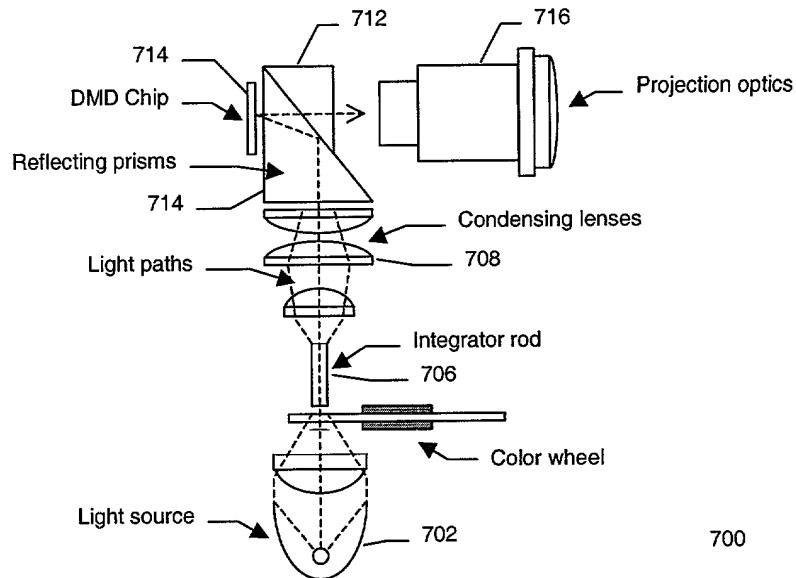


Figure 7

Single-Chip DMD Projection System – Example 1

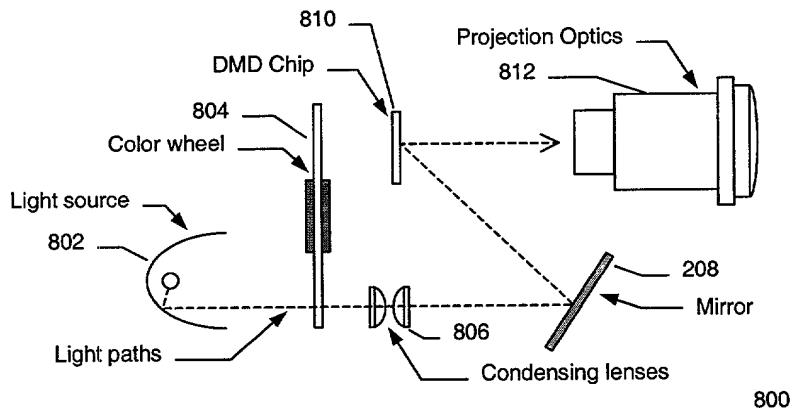


Figure 8

Single-Chip DMD Projection System – Example 2

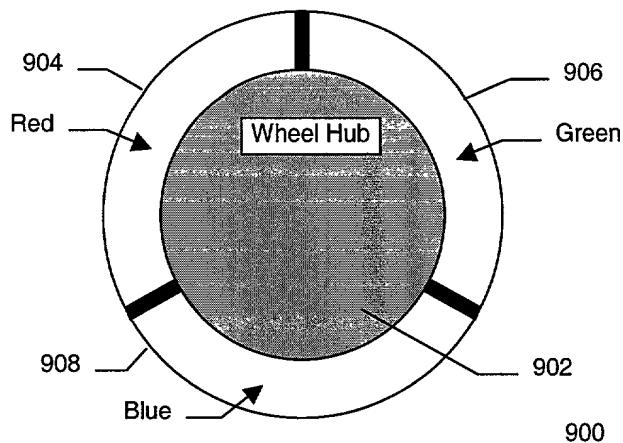


Figure 9

Three-Segment Color Wheel for Single Chip DMD Projection Systems

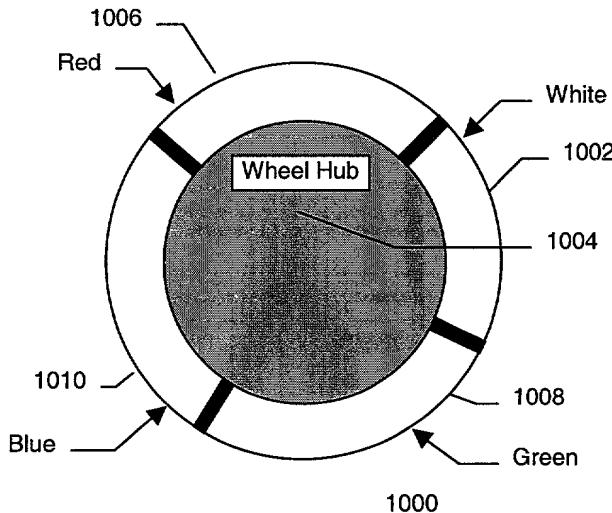


Figure 10

Four-Segment Color Wheel for Single Chip DMD Projection Systems

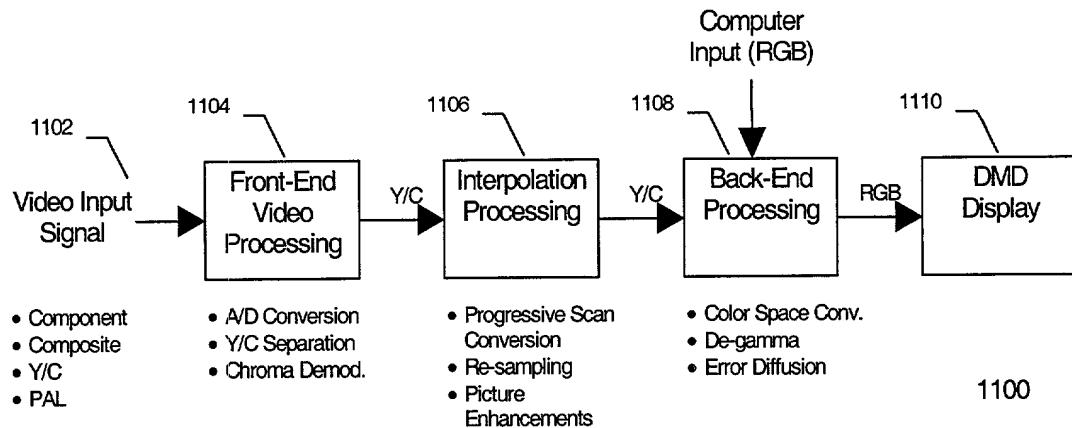


Figure 11

2D DMD Projector Video Processing Block Diagram for Single-Chip DLP Projector

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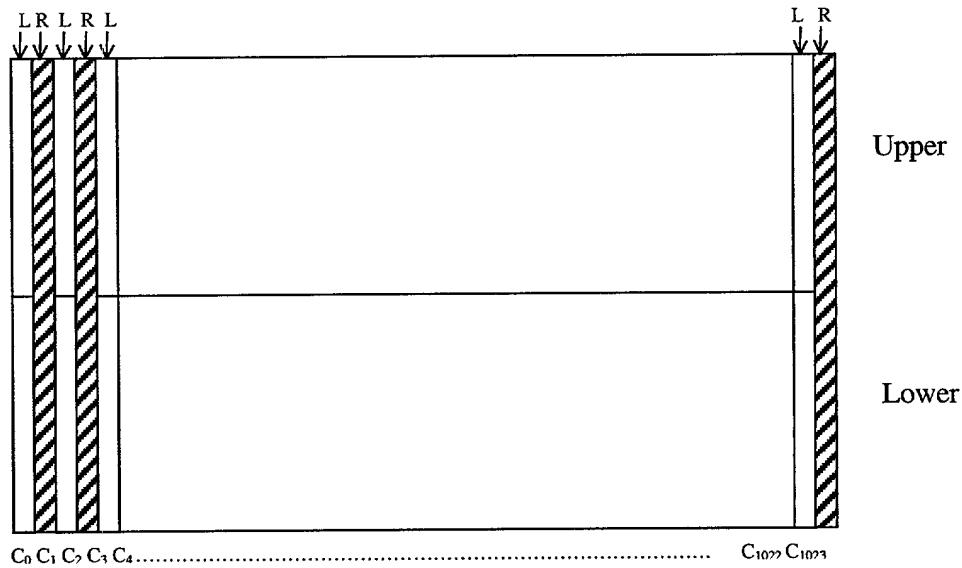


Figure 12

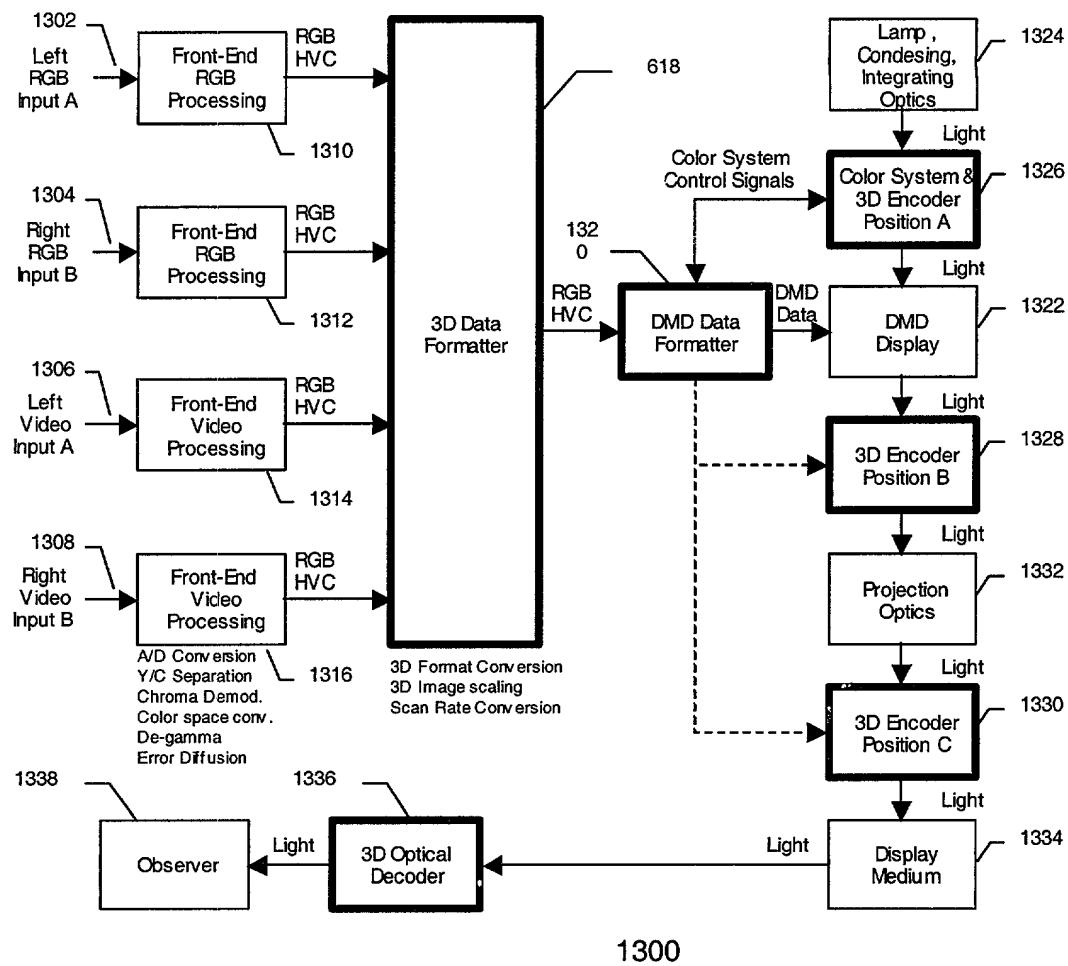


Figure 13

Signal Flow and Optics Block Diagram for DMD Based 3D Projection System

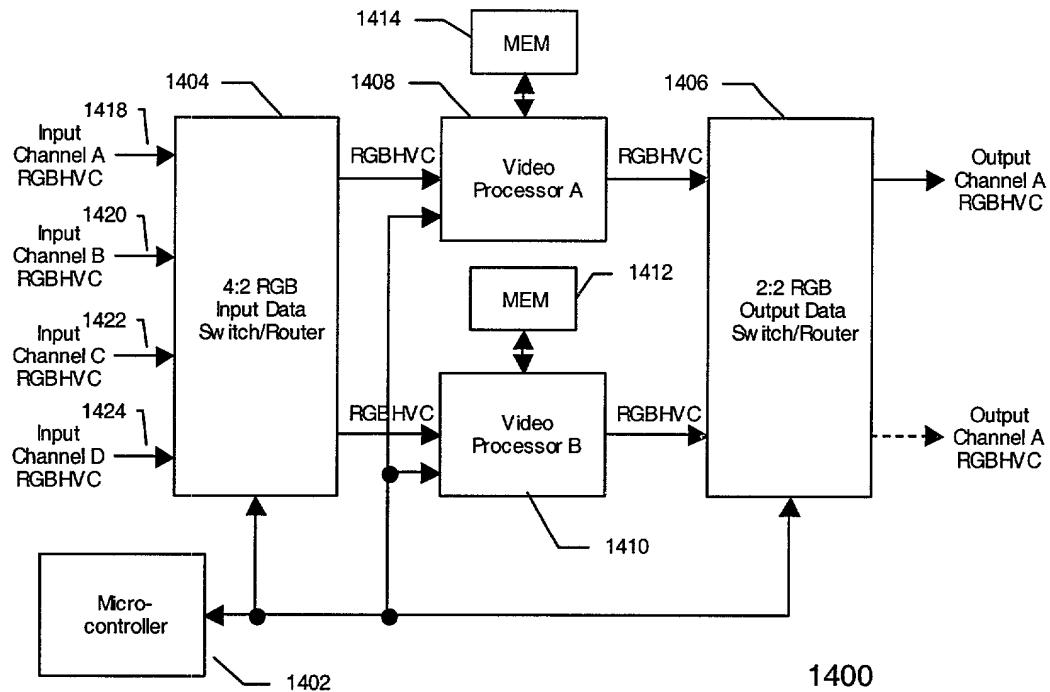


Figure 14
3D Data Formatter Block Diagram

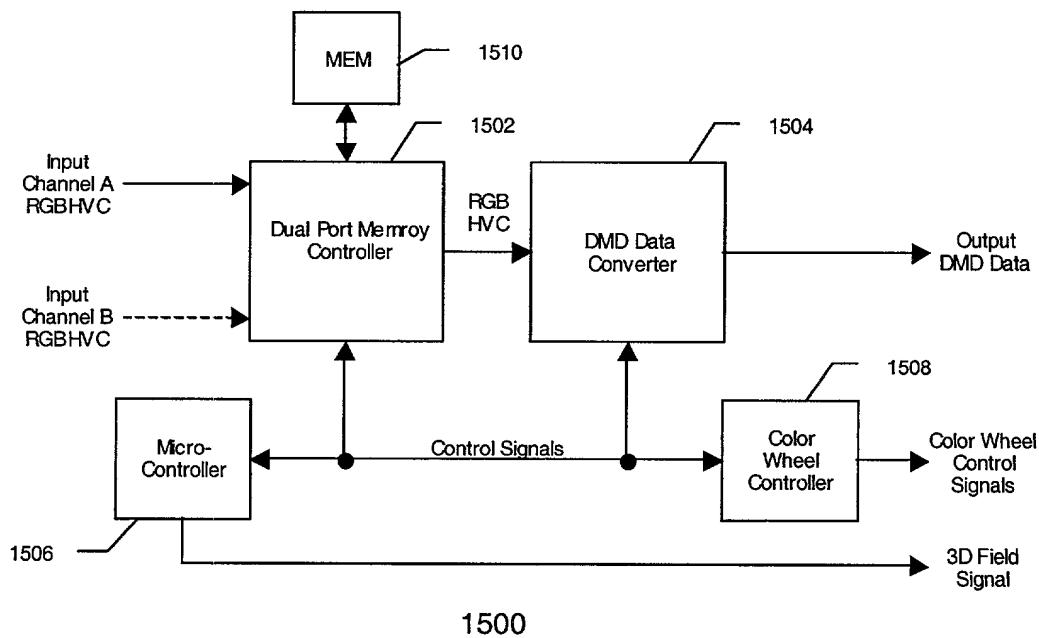


Figure 15
DMD Data Formatter Block Diagram

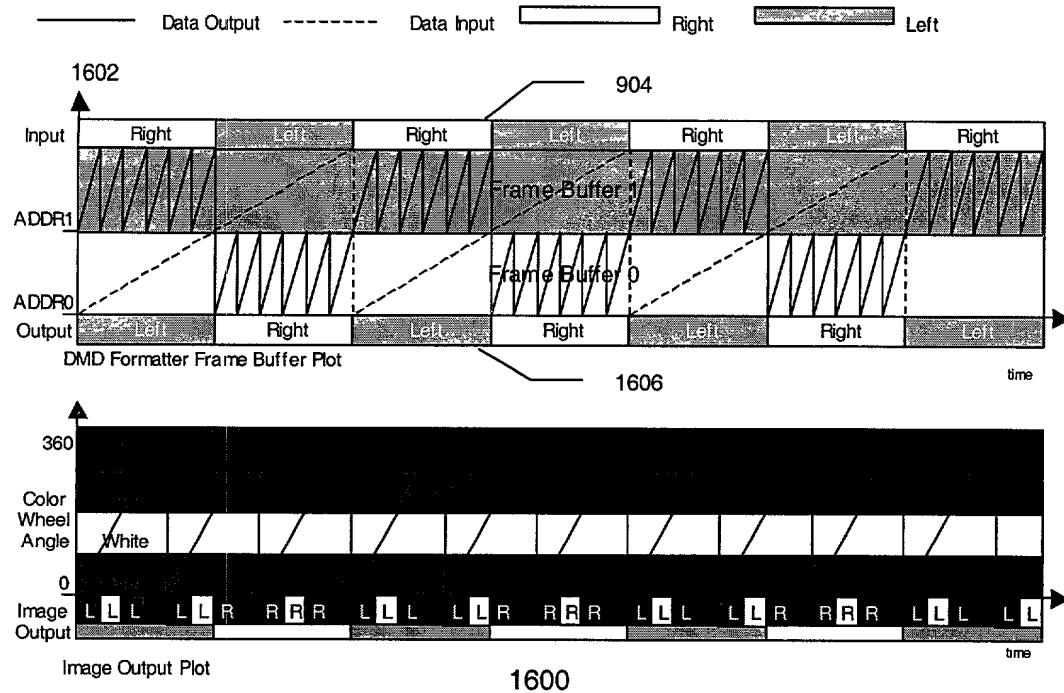


Figure 16

DMD Data Formatter Chart for Input Synchronized Frame Sequential 3D Input Using Four-Segment Color Wheel (Chart applies to 75Hz, 80Hz, and 85Hz input signals)

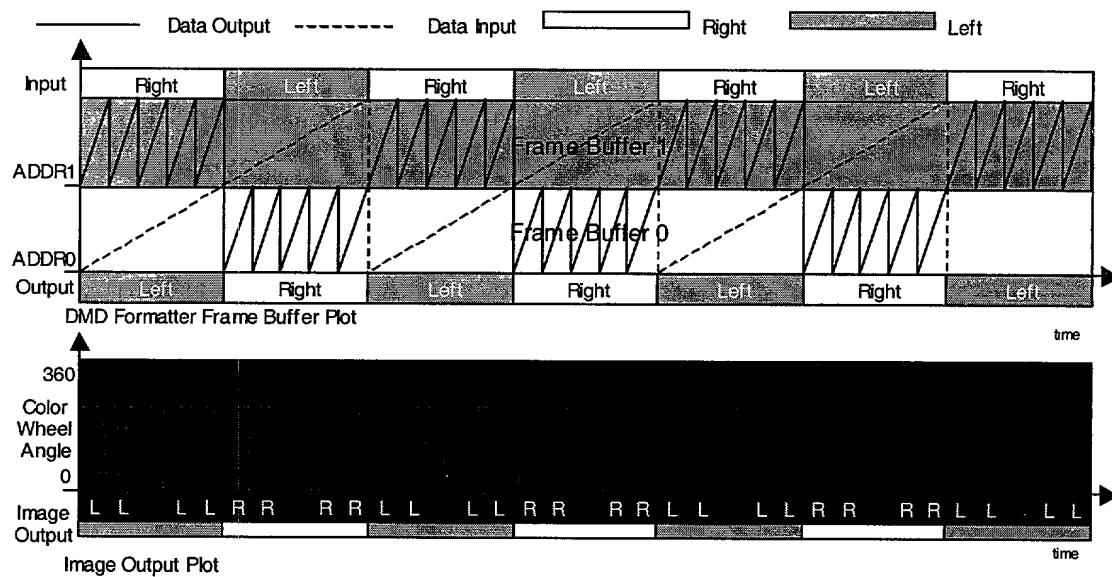


Figure 17

DMD Data Formatter Chart for Input Synchronized Frame Sequential 3D Input Using Three-Segment Color Wheel (Chart applies to 72Hz, 75Hz, and 80Hz input signals)

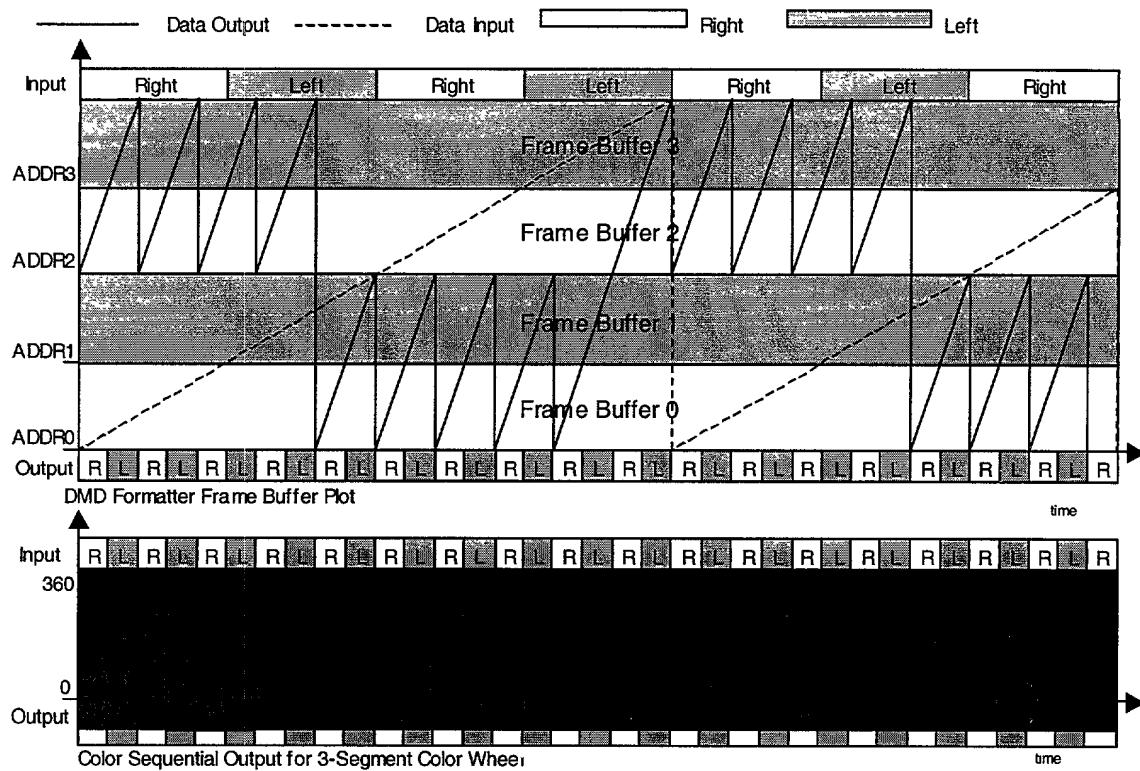


Figure 18

Input Synchronized Color Sequential 3D Using a Three Segment Color Wheel and Quad Frame Buffer
(Chart applies to 72Hz, 75Hz, and 80Hz input signals)

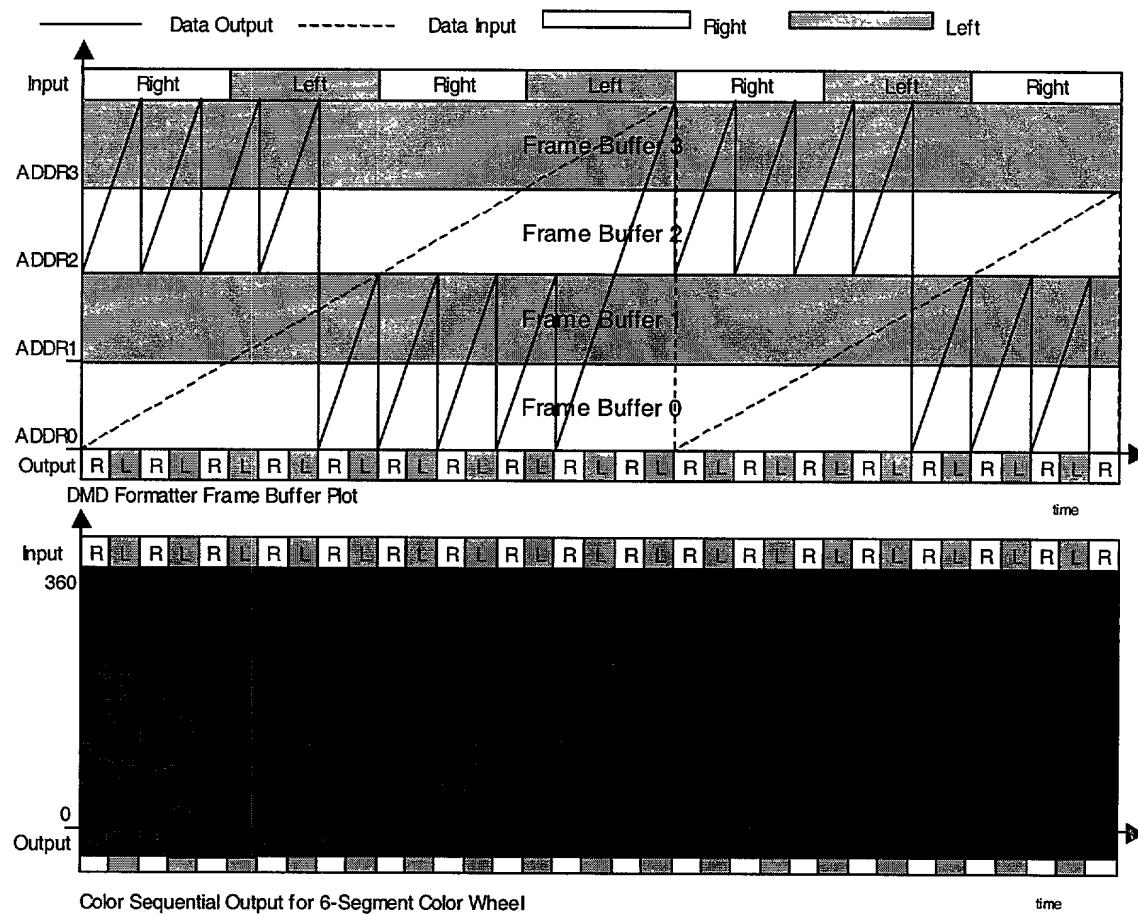


Figure 19

**Input Synchronized Color Sequential 3D Using a Six-Segment Color Wheel and Quad Frame Buffer
(Chart applies to 72Hz, 75Hz, and 80Hz input signals)**

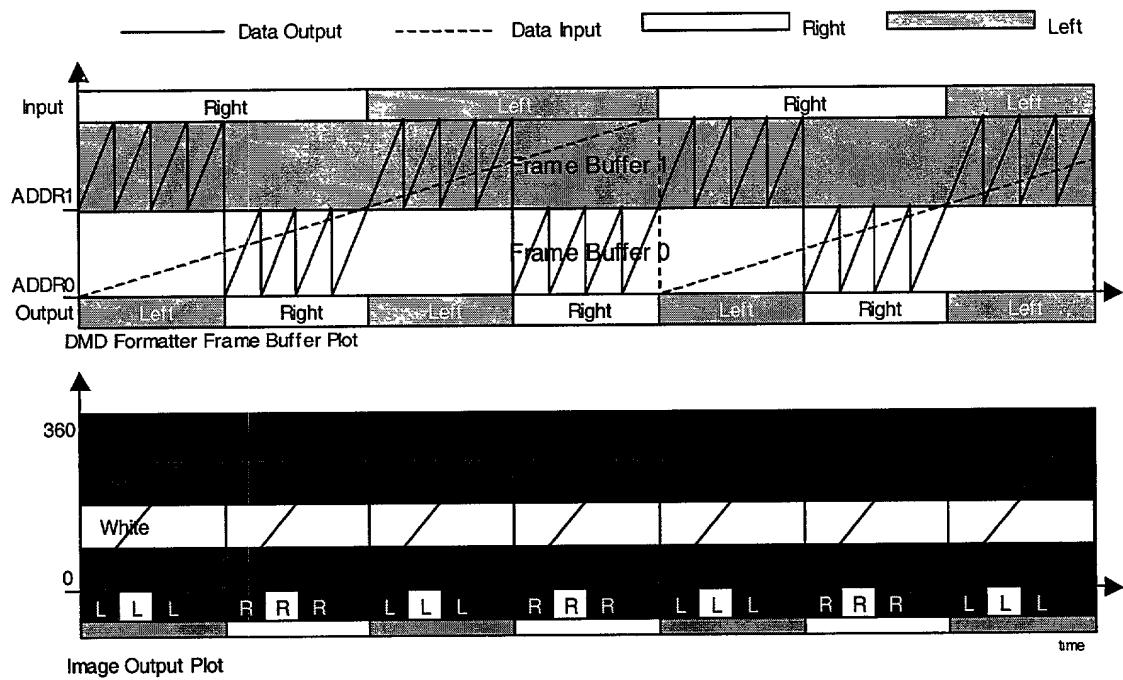


Figure 20

DMD Formatter Chart for Output Synchronized Frame Sequential 3D Format for 60Hz Input Using a Four-Segment Color Wheel

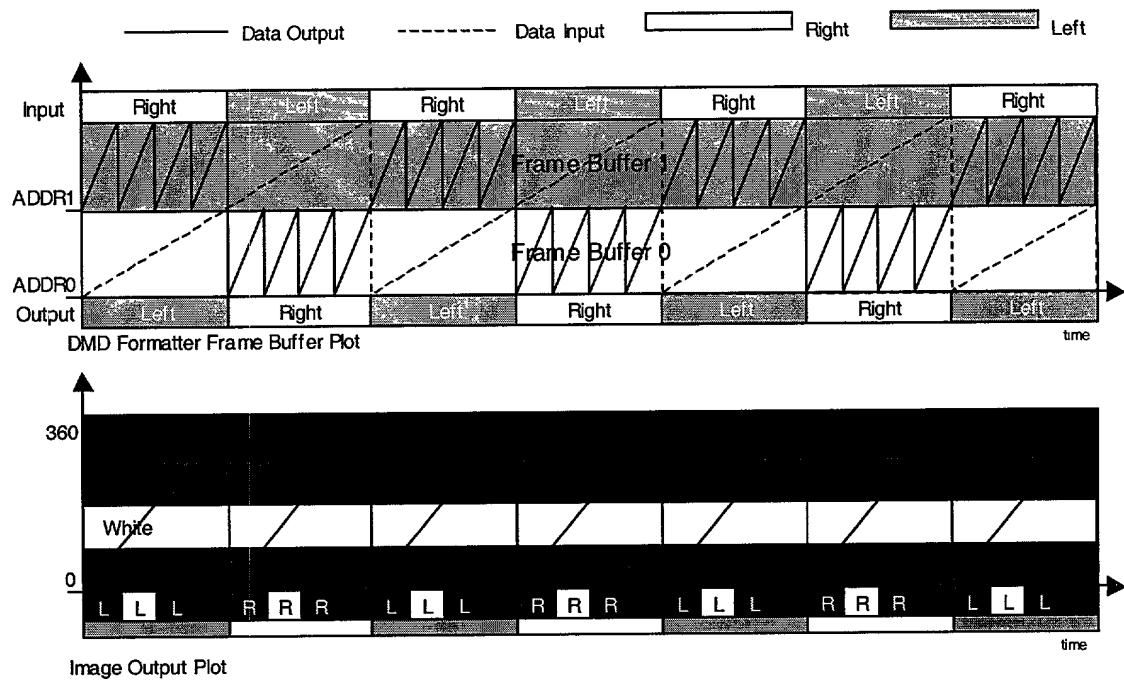


Figure 21

DMD Formatter Chart for Output Synchronized Frame Sequential 3D Format for 120Hz Input Using a Four-Segment Color Wheel

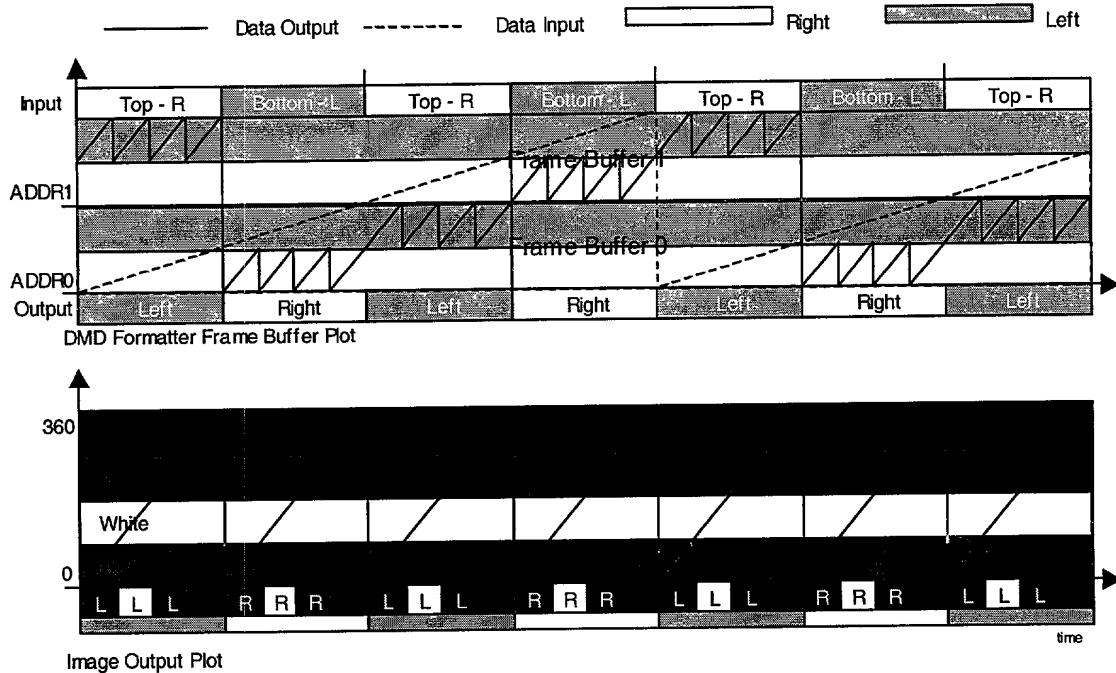


Figure 22

DMD Formatter Chart for Output Synchronized Frame-Sequential 3D Format for 60Hz Over-Under 3D Input using a Four-Segment Color Wheel

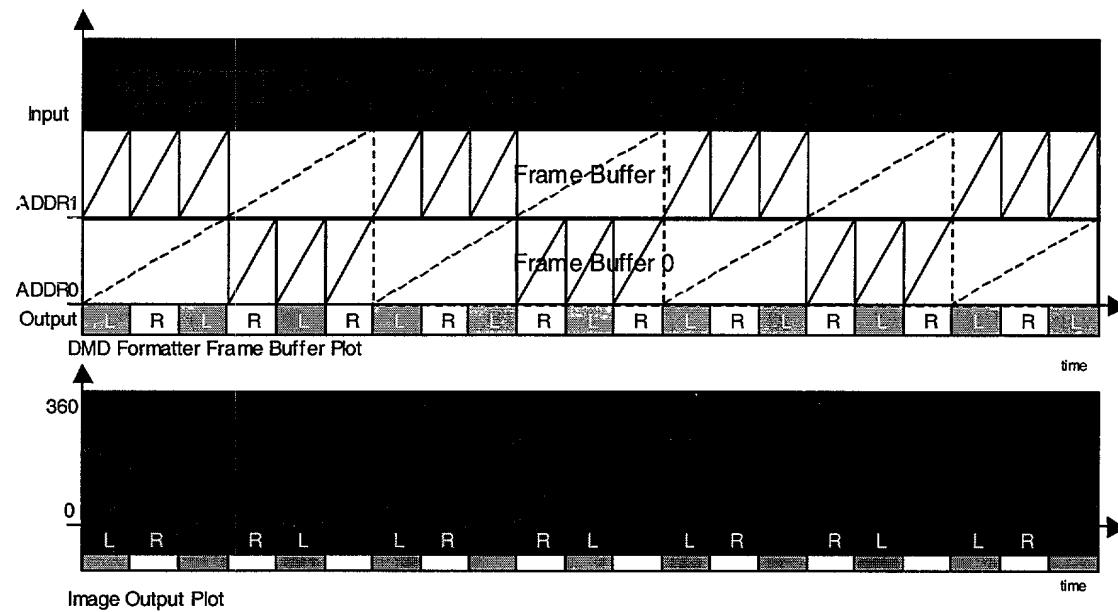


Figure 23

DMD Formatter Chart for Output Synchronized Color Sequential 3D Format for 120Hz Color-Sequential 3D Input, Using a Three-Segment Color Wheel

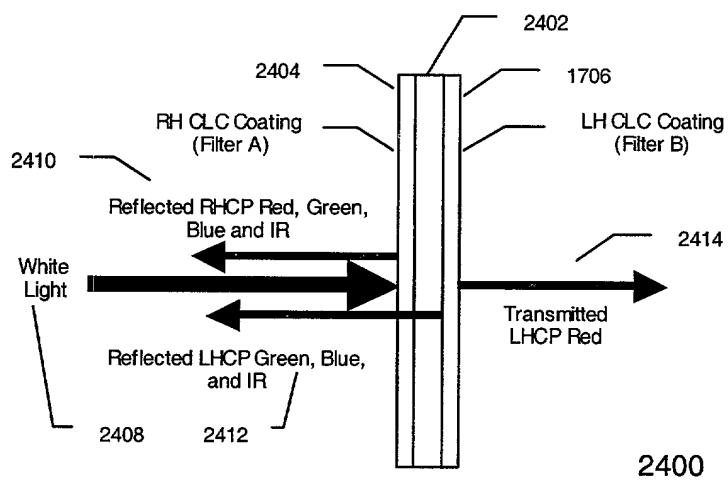
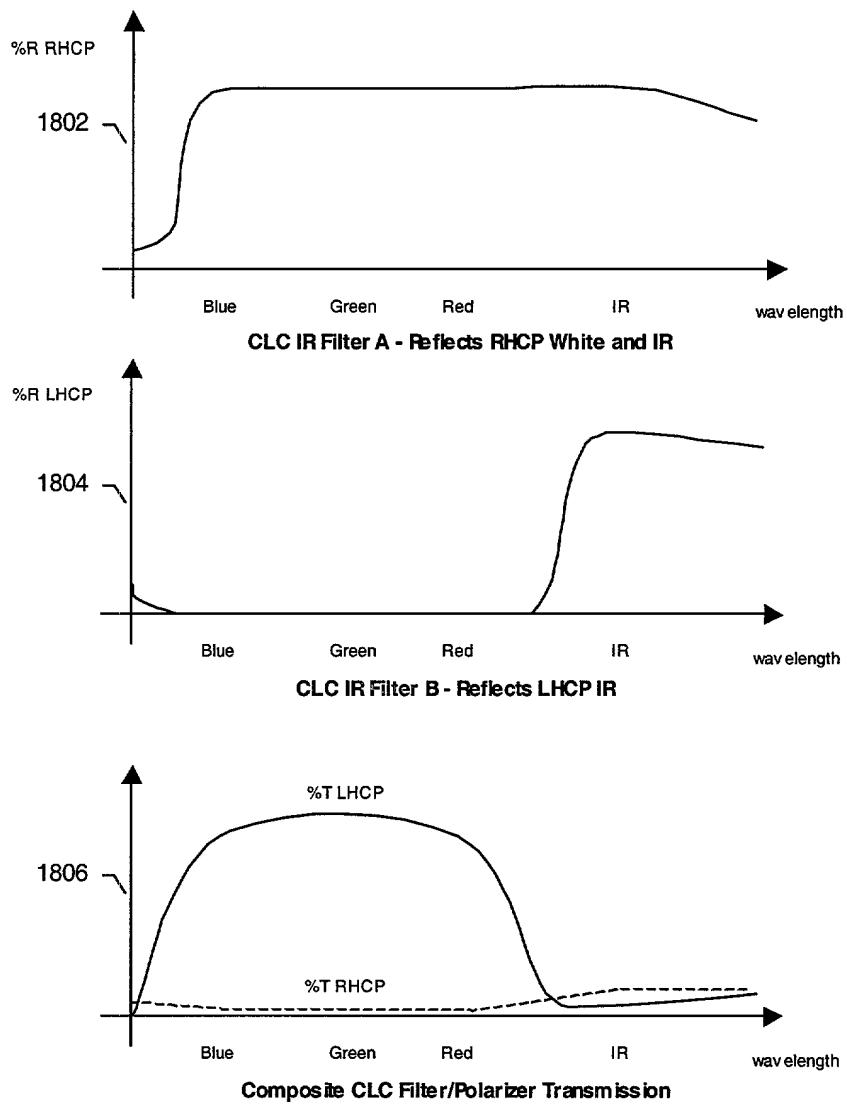


Figure 24

**Cholesteric Liquid Crystal Reflective Circular Polarizing Red Filter
(Similar for White, Green, or Blue)**



1800

Figure 25

Spectral Response for CLC IR Filter/Circular Polarizer

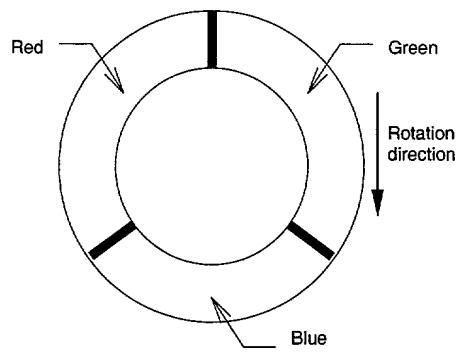


Figure 26

Three-Segment Color Wheel Type CW-A

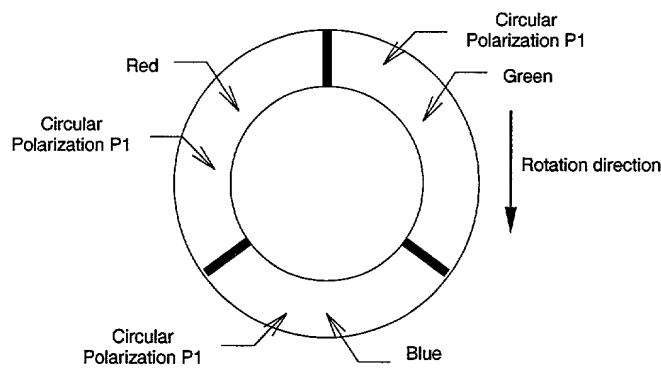


Figure 27

Three-Segment Color Wheel Type CW-B

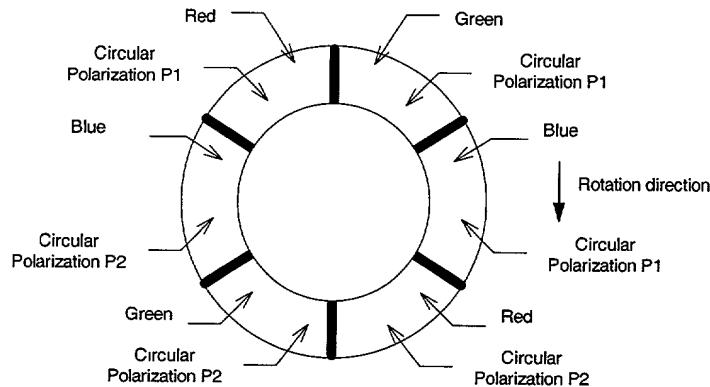


Figure 28

Six-Segment Color Wheel Type CW-C

Patent Drawing

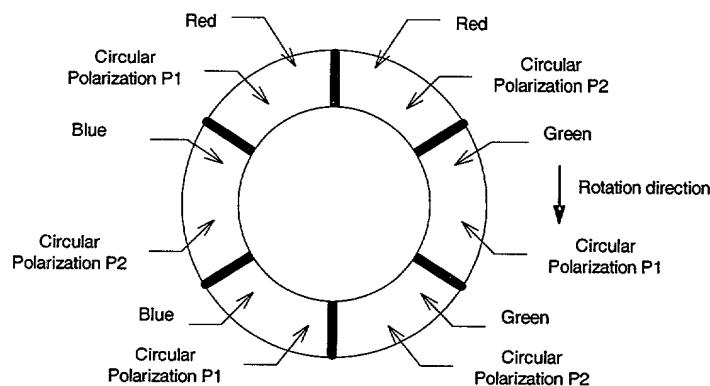


Figure 29

Six-Segment Color Wheel Type CW-D

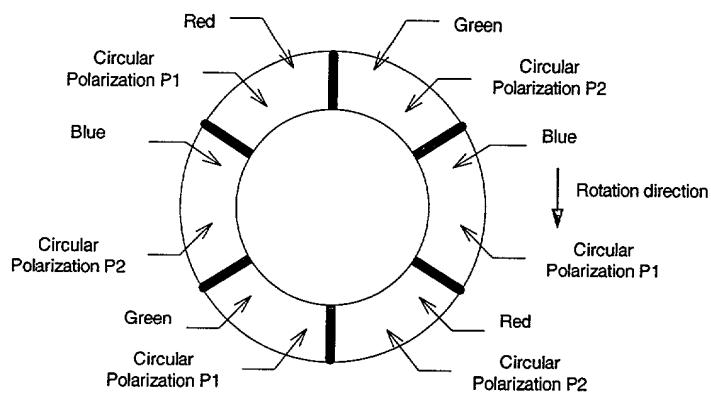


Figure 30

Six-Segment Color Wheel Type CW-E

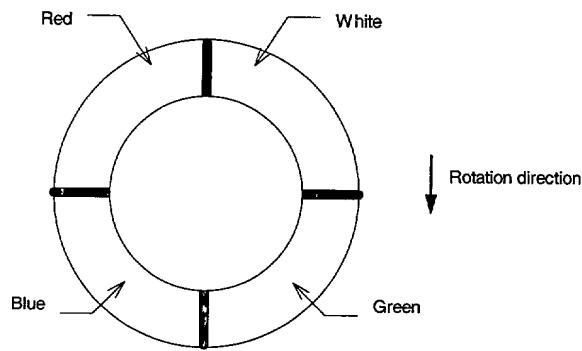


Figure 31

Four-Segment Color Wheel Type CW-F

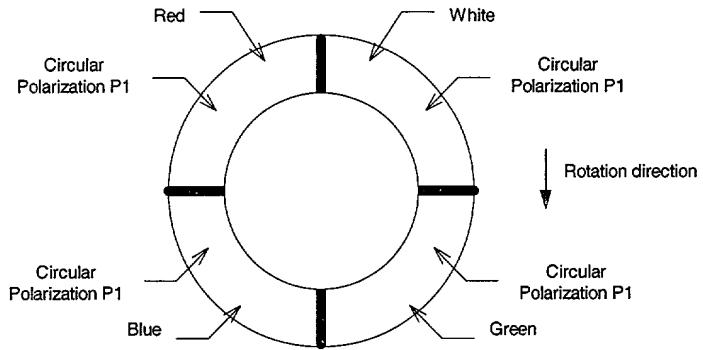


Figure 32
Four-Segment Color Wheel Type CW-G

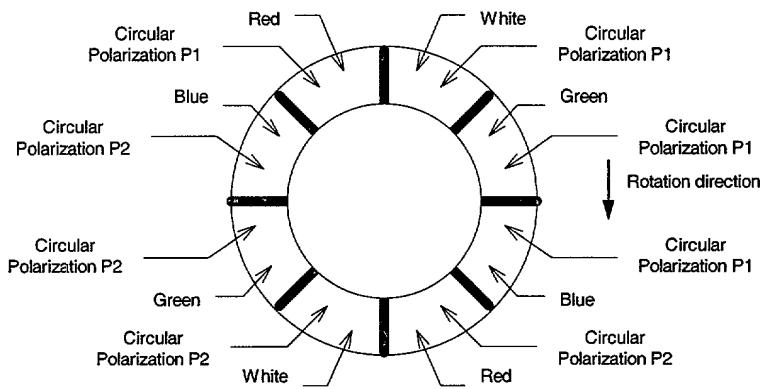


Figure 33
Eight-Segment Color Wheel Type CW-H

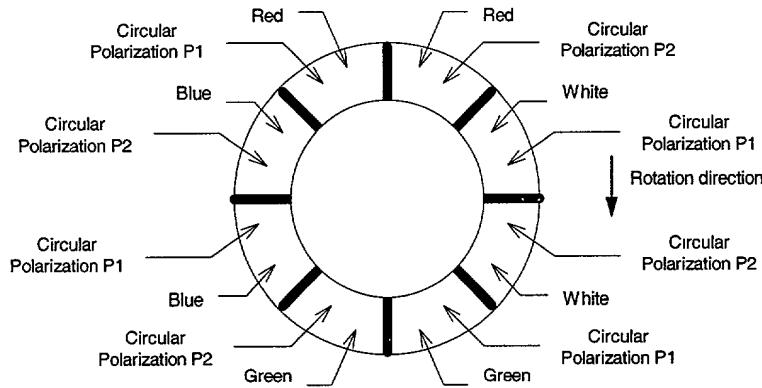


Figure 34

Eight-Segment Color Wheel Type CW-I

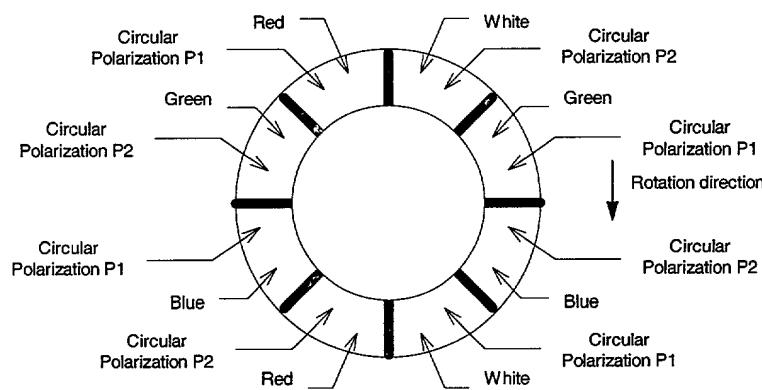


Figure 35

Eight-Segment Color Wheel Type CW-J

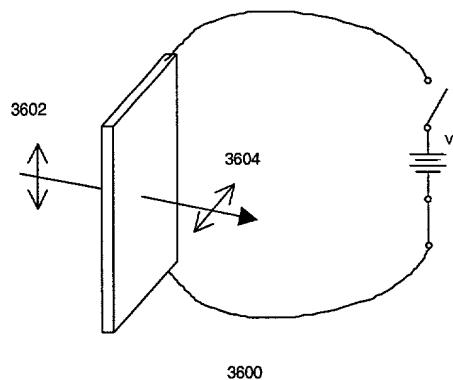


Figure 36

Liquid Crystal Rotator with no Applied Terminal Voltage

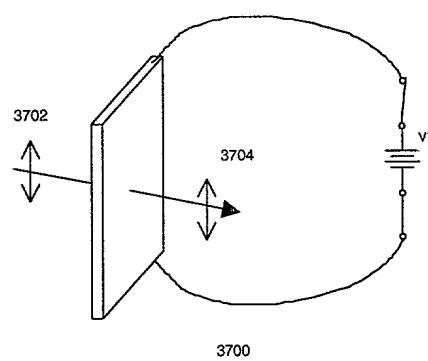


Figure 37

Liquid Crystal Rotator with Applied Terminal Voltage

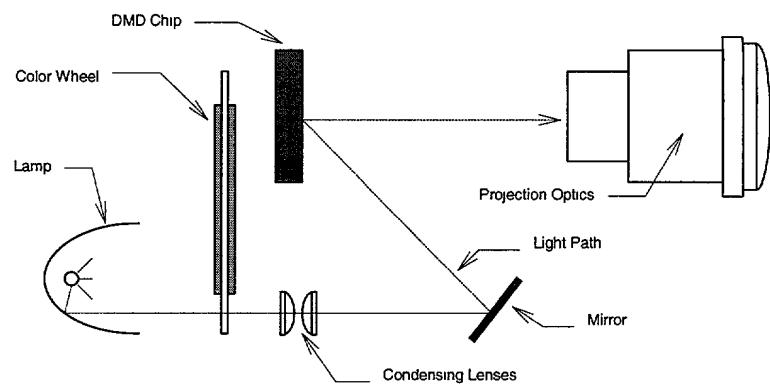


Figure 38

DMD Based Stereo 3D Projector, 3D Optical Configurations: A, B, H, I, K, M, N, S, U, W

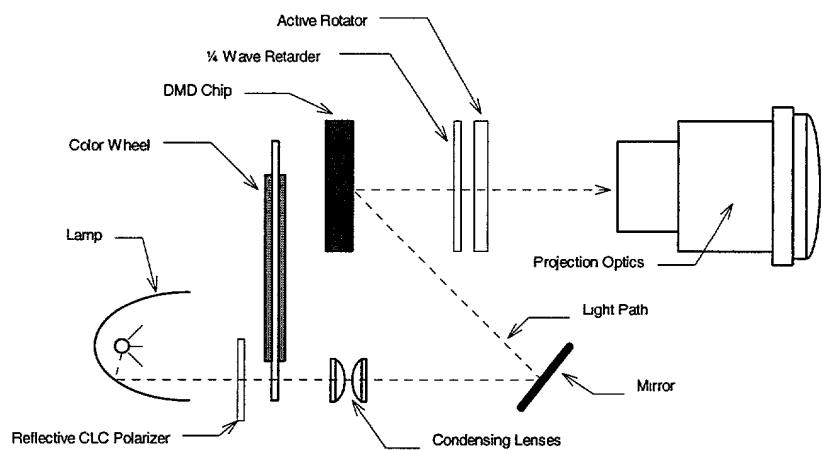


Figure 39

DMD Based Stereo 3D Projector, 3D Optical Configurations: C and O

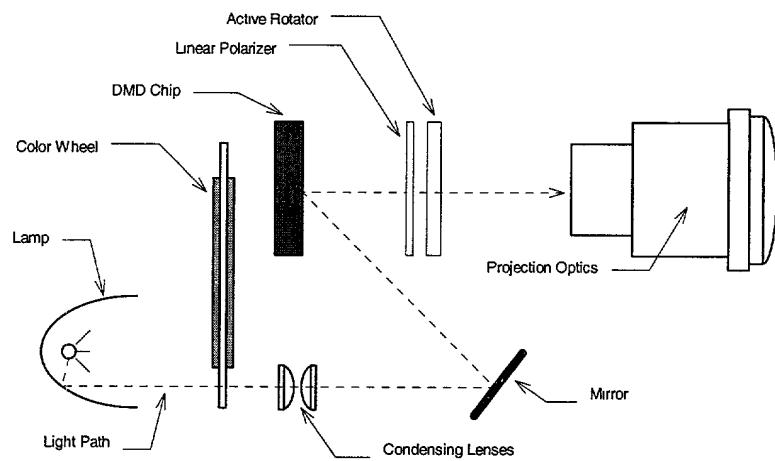


Figure 40

DMD Based Stereo 3D Projector, 3D Optical Configurations: D and P

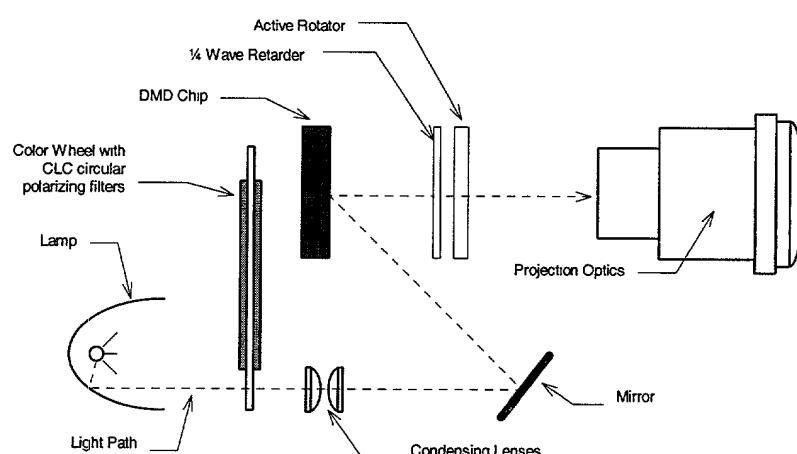


Figure 41

DMD Based Stereo 3D Projector, 3D Optical Configurations: E and Q

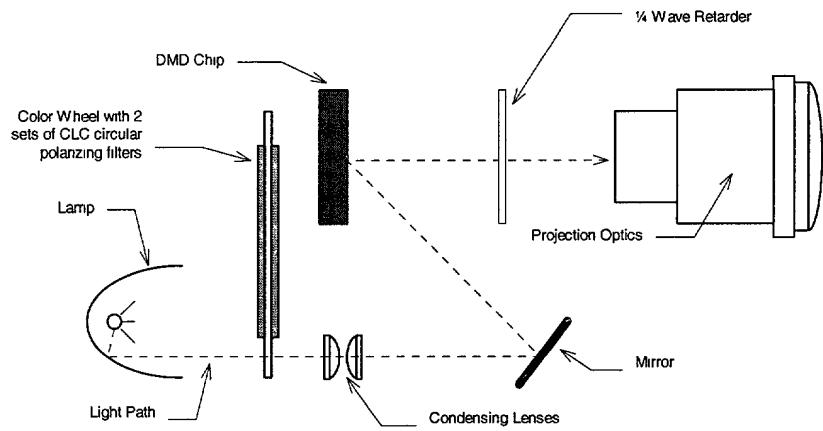


Figure 42

DMD Based Stereo 3D Projector, 3D Optical Configurations: F, G, J, L, R, T, and V

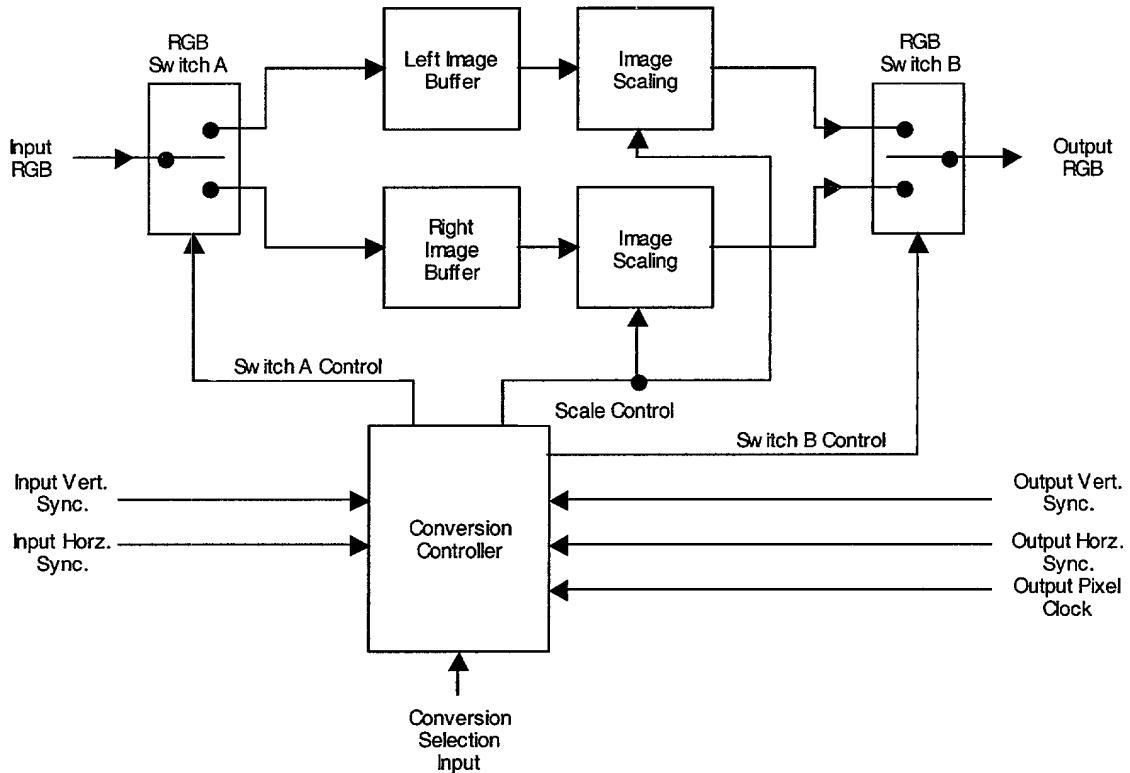


Figure 43

3D Data Formatter Block Diagram

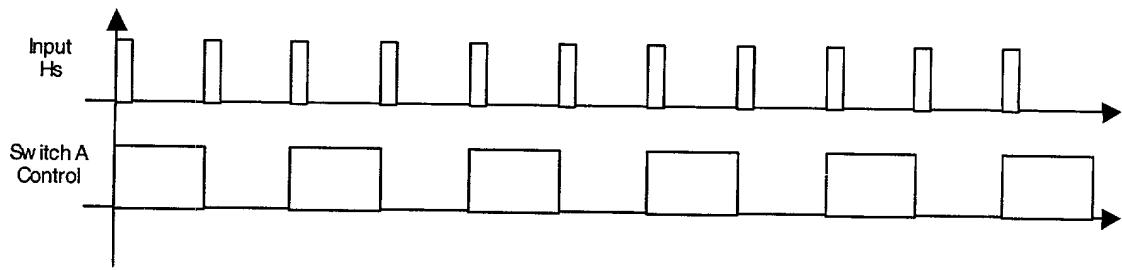


Figure 44
Switch A Control for Row-Interleaved RGB Input

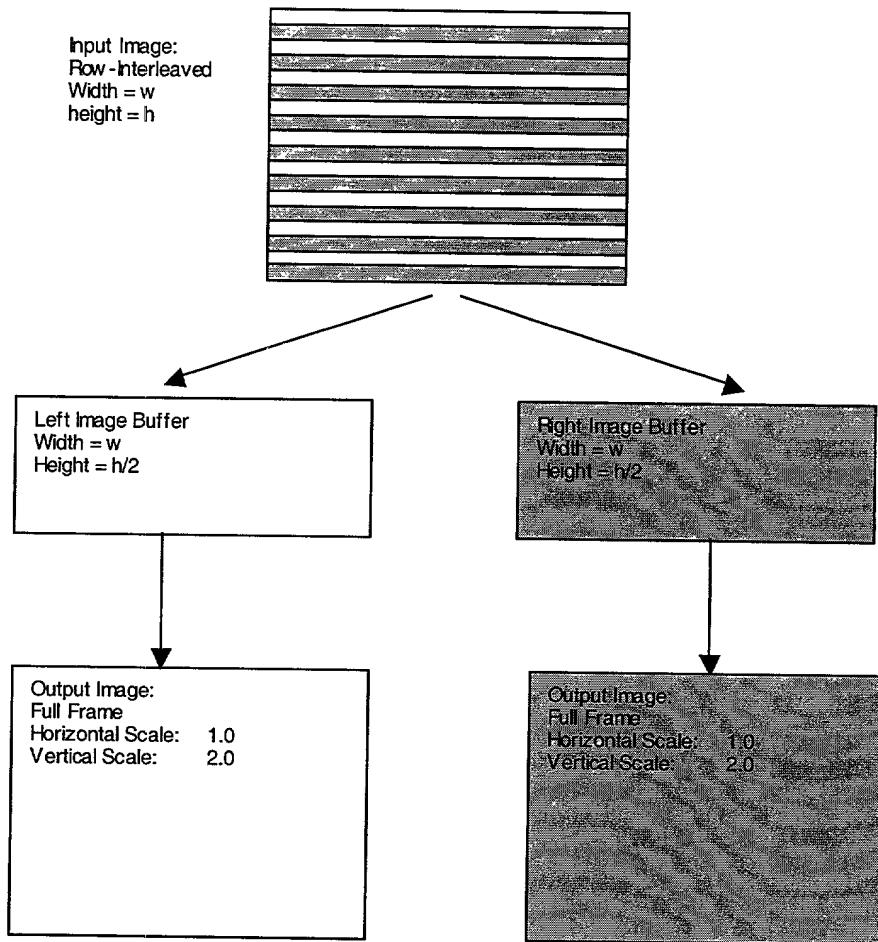


Figure 45
Output Scaling for Row-Interleaved 3D Format Input

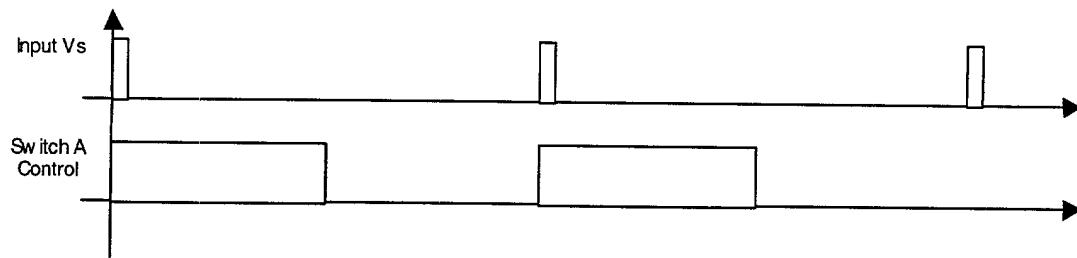


Figure 46

Switch A Control for "Over-Under" RGB 3D Format

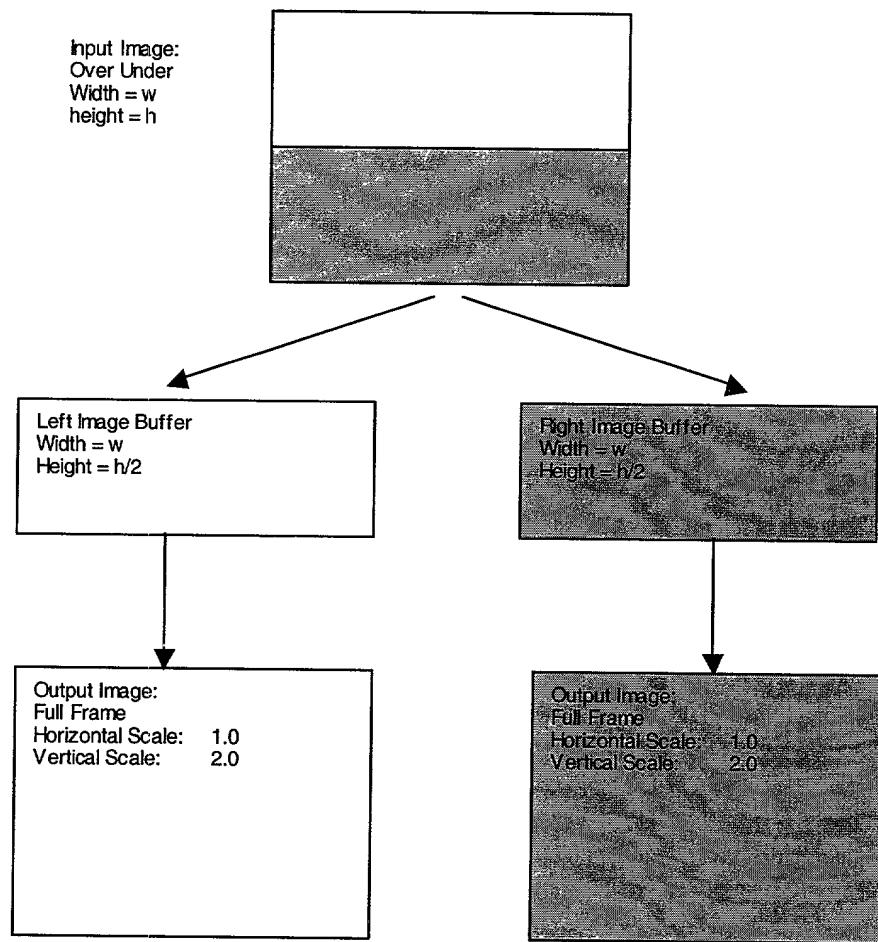


Figure 47

Output Scaling for Over-Under 3D Format Input

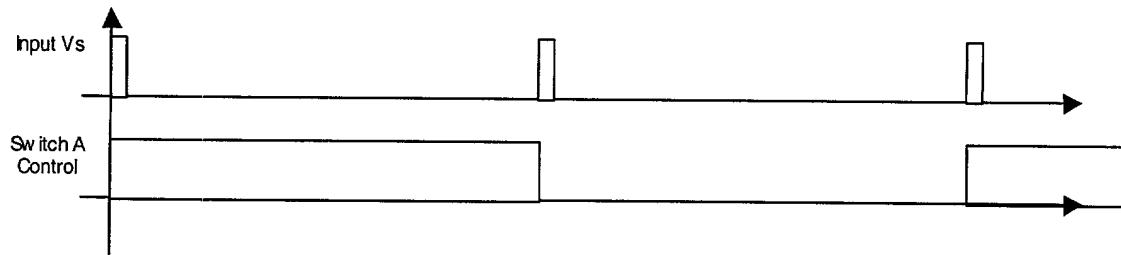


Figure 48

Switch A Control for "Page-Flipped" 3D Input

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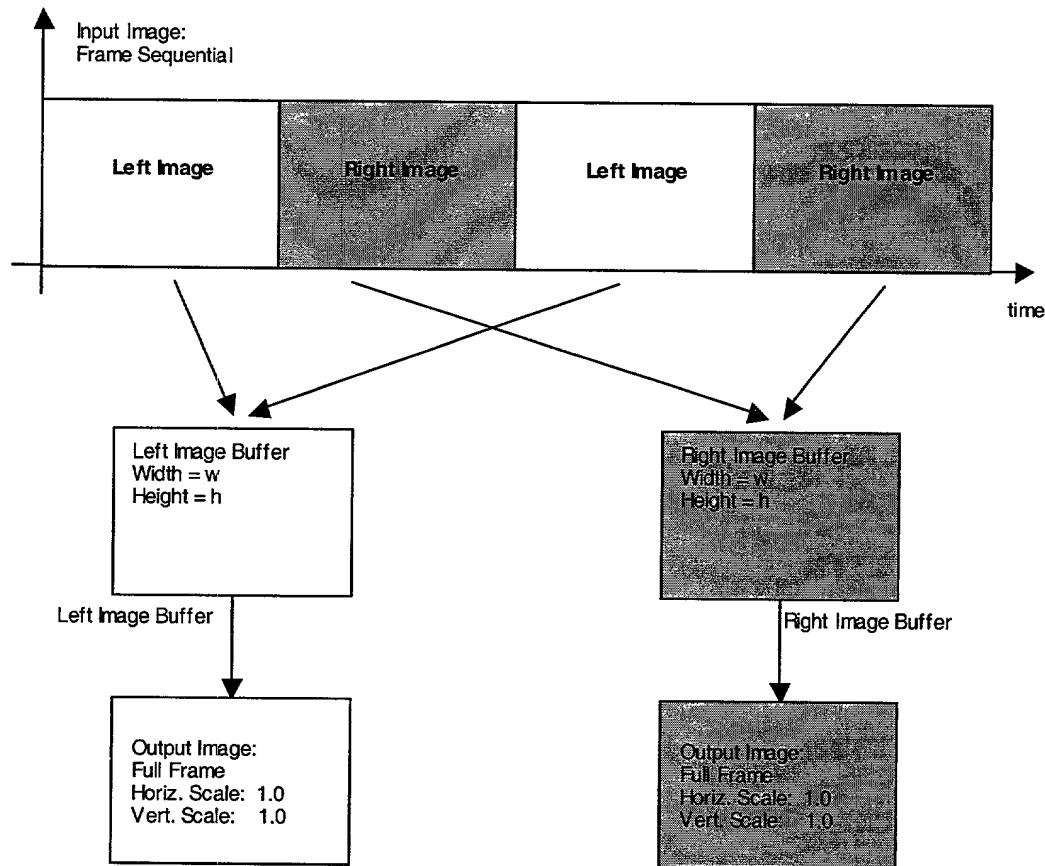


Figure 49

Output Scaling for "Page-Flipped" 3D Format Input

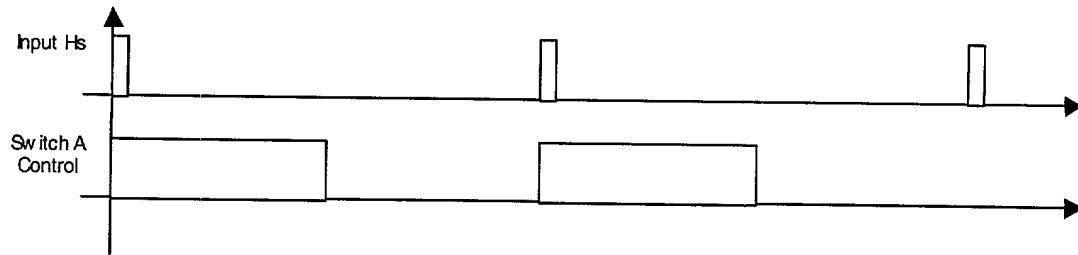


Figure 50

Switch A Control for "Side-by-Side" RGB 3D Input

EQUATIONS FOR IMAGE PROCESSING

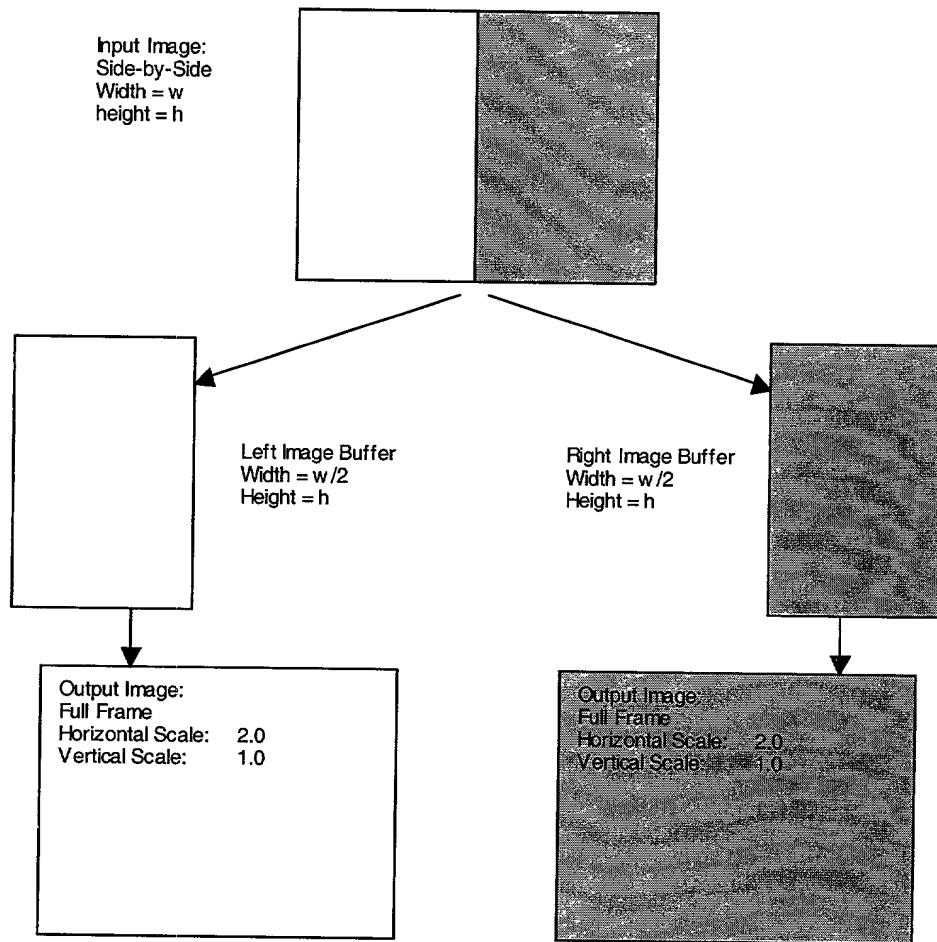


Figure 51

Output Image Scaling for Side-by-Side 3D Format Input

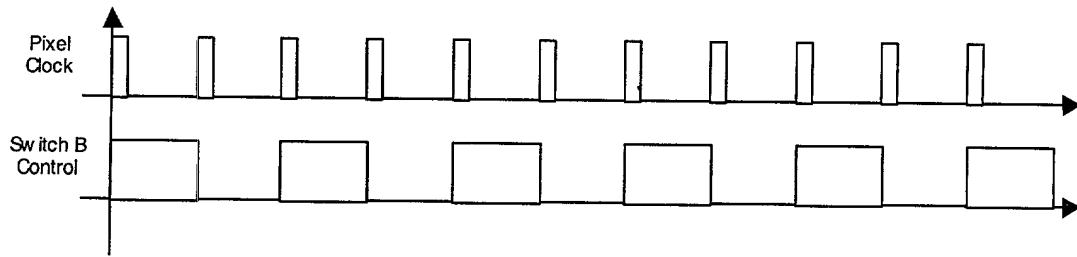


Figure 52

Switch B Control for 3D Data Formatter Block

3D Image Generation Pipeline

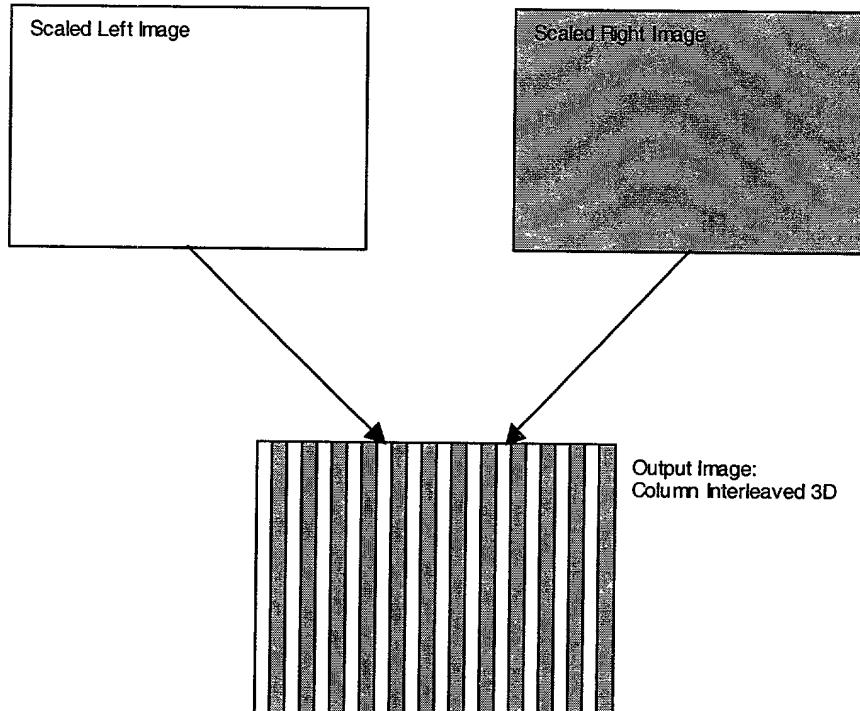


Figure 53

Graphical Illustration of 3D Data Formatter Output

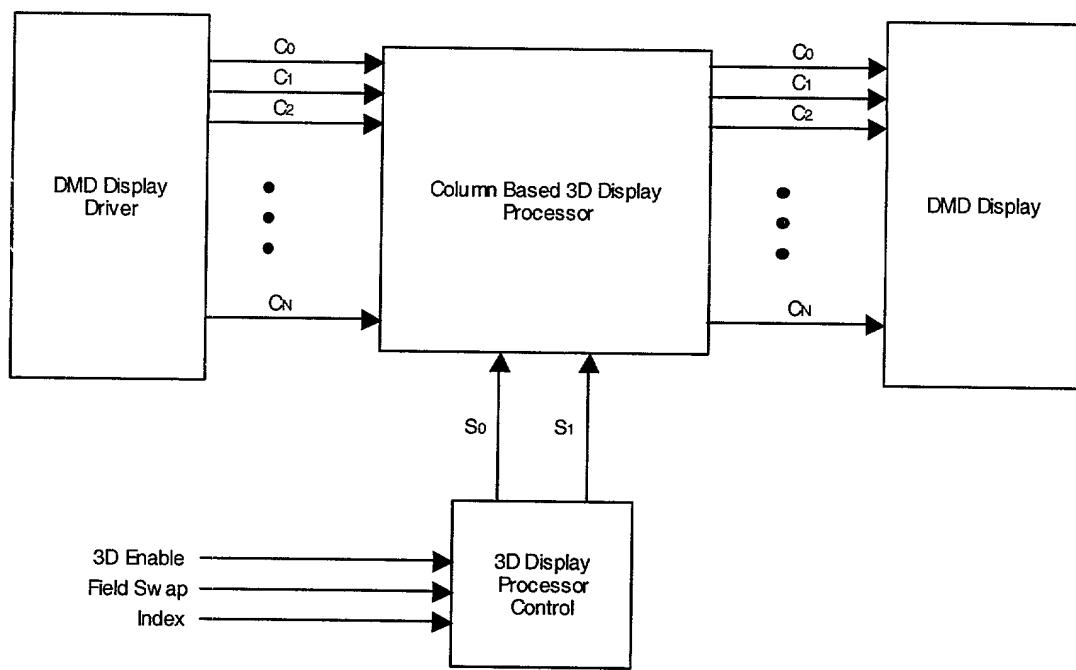


Figure 54

3D Display Formatter

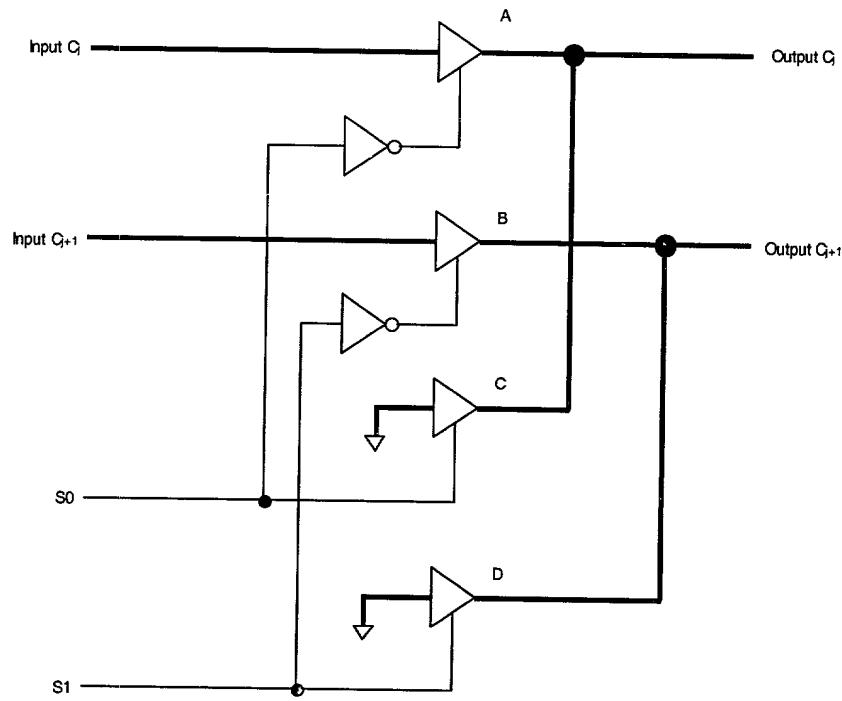


Figure 55

Block Diagram for 3D Display Processor Using Column Blanking Method

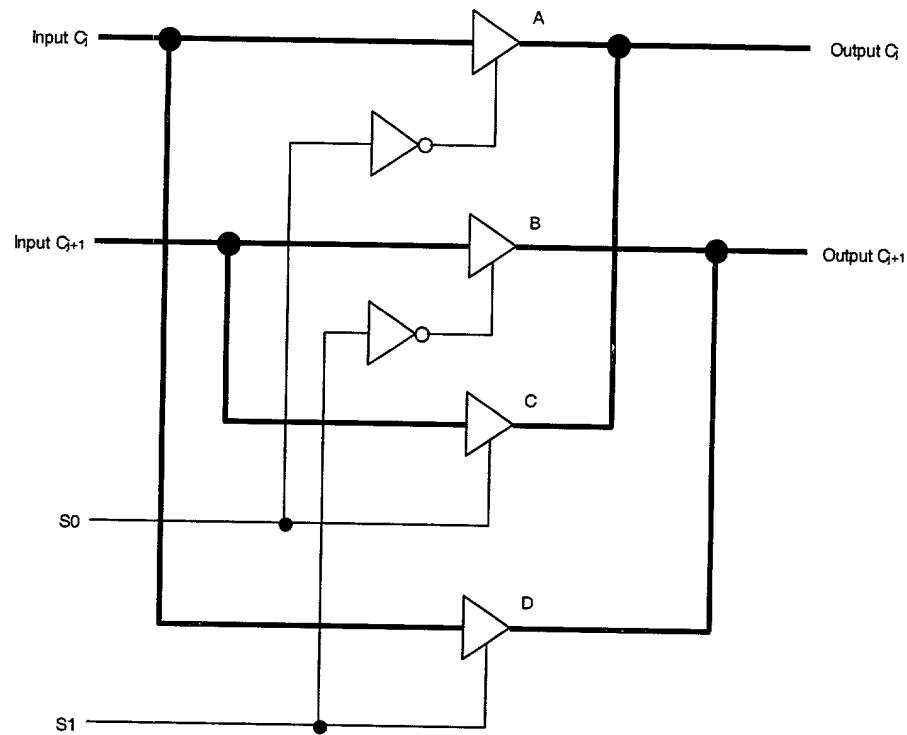


Figure 56

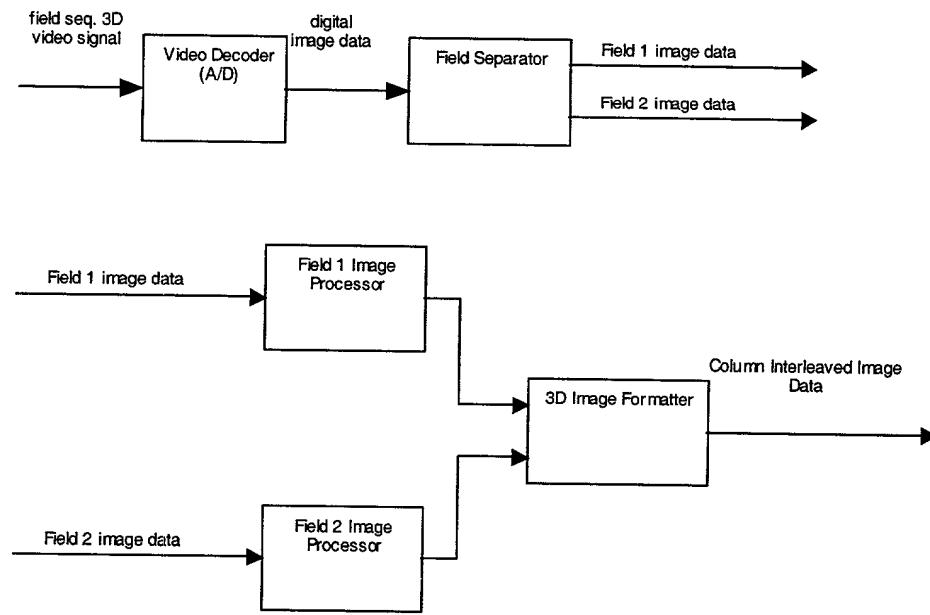


Figure 57